GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

STARRED QUESTION NO:248
ANSWERED ON:06.12.2001
MONITORING OF ELECTRIC ENERGY CONSUMPTION IN TRACTION
CHANDRA VIJAY SINGH;SADASHIVRAO DADOBA MANDLIK

Will the Minister of RAILWAYS be pleased to state:

(a) whether the Railways are yet to evolve controls to monitor electric energy consumption in traction;

(b) if so, whether there is no provision for energy meters in locomotives to monitor electric energy consumption;

(c) if so, the reasons therefor;

(d) whether the specific standard for energy consumption adopted by Railways is erroneous;

(e) if so, whether some State Electricity Boards had charged higher tariffs from the Railways than those charged from other bulk consumers; and

(f) if so, the remedial measures taken/proposed to be taken by the Government to avoid excess payment to State Electricity Boards?

Answer

MINISTER OF RAILWAYS (SHRI NITISH KUMAR)

(a) to (f) A statement is laid on the Table of the Sabha.

STATEMENT REFERRED IN REPLY TO PARTS (a) TO (f) OF STARRED QUESTION NO.248 ASKED BY SHRI SADASHIVRAO DADOBA MANDLIK AND SHRI CHANDRA VIJAY SINGH TO BE ANSWERED IN LOK SABHA ON 6.12.2001 REGARDING MONITORING OF ELECTRIC ENERGY CONSUMPTION IN TRACTION.

(a): No, Sir. There is full control over electricity drawn for traction. At all sub-stations from where electricity is drawn for traction electric energy meters are provided for monitoring energy consumed for electric traction. The meters are periodically tested jointly with electric supply authority personnel. Monitoring of electric energy consumed for traction is closely linked with the speed of the train, braking requirements due to signals and the individual load to be hauled by the locomotive. Control is exercised by periodical review of total energy drawn at different substations and the actual traffic moved.

(b) & (c): Electric energy meters are being provided on all new builds of 3-phase electric locomotives manufactured at CLW. In earlier builds, energy meters had been provided on a few electric locomotives on trial. Because of the intricacies involved in measurement of electrical energy at 25 KV on board the locomotive, the energy meters available in the earlier years were not found to be user friendly and the meters also did not meet all requirements of stringent operating conditions. With the advent of microprocessor application in different areas, it has now become possible to employ on board, direct reading user-friendly energy meters at reasonable cost. It has also become possible to integrate energy metering function with the speed measurement devices for more meaningful appreciation of the consumption pattern. Specification for microprocessor based speed and energy monitoring systems have been drawn up and prototypes have also been cleared after successful service trials.

(d): No, Sir. Electric energy drawn for traction is metered at supply points. There is no scope for unaccounted drawal of energy from the traction network or from the locomotives. From time to time RDSO conduct instrumented trials for measuring electric energy consumed in different services. Based on the trials, the norms are updated, for apportionment of relative consumption of electrical energy amongst different types of service for example, suburban trains, long distance Mail/Express trains, etc. Such apportionment does not alter the total energy drawn, which is metered at every point of supply by the supply authorities.

(e): It is true that some State Electricity Boards charge the railways a tariff higher than those charged from other bulk consumers. Presently, Railway is purchasing traction power from 17 States Electricity Boards (SEBs) situated in 17 state and three other power companies. Out of these 17 states, State electricity Regulatory Commissions (SERCs) are functioning in 12 states. SERCs decide the revision of tariff periodically as and when the proposals are submitted by the State Electricity Boards/Distribution licensees after examining presentations from different consumers including Railways After presenting their case before SERCs during current financial year, Railways have been able to get reduction in tariff in 3 states, avoided increase in 2 states and limited increase in 2 states during the current financial year. However, so far Railways have not been fully succeeded in securing reasonable tariff as ordained under Section 29 of the ERC Act, 1998, in terms of which the tariff should progressively reflect the cost of supply of

electricity. From five states, there has been no positive response in regard to reduction in traction tariffs.

(f): Besides pursuing the cases with the individual ERCs forreducing tariff to reasonable level, Railways are pursuing efforts for availing direct power from Central Generating agencies like National Thermal Power Corporation (NTPC), Nuclear Power Corporation (NPC), etc.

Railways have already met with appreciable success by availing direct supply from NTPC for Ghaziabad-Kanpur section of Northern Railway at reduced cost since November, 2000. Proposals for availing power from NTPC and NPC at other places are under active consideration in consultation with Ministry of Power.